PIEZOELECTRIC CERAMIC AND ITS PRODUCTION

Patent number: JP8104568
Publication date: 1996-04-23
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Classification:
- International: C04B35/49; H01L41/08; H01L41/24
- european:
Application number: JP19940236746 19940930
Priority number(s):

Abstract of **JP8104568**
PURPOSE: To improve sinterability, to enable sintering even at a low temp. and to obtain piezoelectric ceramic having a controlled fine structure by using powdery starting material for sintering having a specified particle diameter and a specified particle size distribution.
CONSTITUTION: This piezoelectric ceramic has 0.5-5&mu m average grain size and 90-100% of the grains are within the range of 0.5-5&mu m. In order to produce this piezoelectric ceramic, fine powder having <=0.4&mu m average particle diameter and a particle size distribution in which particles whose size is 2-5 times the average particle diameter account for 7-10wt.% is used as powdery starting material for sintering. This piezoelectric ceramic increases its relative permittivity and electromechanical coupling factor in accordance with the increase of the density while reducing the elastic compliance. As a result, the piezoelectric constant is increased and the piezoelectric characteristics can be improved.

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